

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

BRITISH TELECOMMUNICATIONS PLC, §

Plaintiff, §

v. §

IAC/INTERACTIVE CORP, MATCH
GROUP, INC., MATCH GROUP, LLC, and §
VIMEO, INC., §

Defendants. §

Civil Action No. 18-366-WCB

MEMORANDUM OPINION AND ORDER

In this patent infringement action, plaintiff British Telecommunications PLC (“BT”) has brought suit against defendants IAC/InterActiveCorp; Match Group, Inc.; Match Group, LLC; and Vimeo, Inc. (collectively, “IAC”). Although BT initially asserted a number of claims over multiple patents, only a single patent claim now remains in the case. That claim, which is claim 10 of U.S. Patent No. 7,243,105 (“the ’105 patent”), is directed to a method of updating individuals’ personal profiles.

The claim of infringement is asserted against two of the related defendant corporations, Match Group, Inc., and Match Group, LLC, which operate online dating services that are designed to match compatible individuals. IAC has moved for summary judgment that the asserted claim is ineligible for patenting under 35 U.S.C. § 101. For the reasons set forth below, IAC’s motion is granted.

I. BACKGROUND

BT originally asserted a number of claims from six patents against IAC. Only claim 10 of the '105 patent remains in dispute.¹ The '105 patent is directed to “a method and apparatus for updating user profiles based upon personali[z]ed reasoning about user activity.” '105 patent, col. 1, ll. 9–11. The invention employs an “inference engine” that infers and outputs updates to a user profile according to a first set of rules and event statistics. *Id.* at col. 4, ll. 35–60. The first set of rules is weighted according to a set of what the patent refers to as “personali[z]ed rule weightings,” which are generated according to a second set of rules and user preference data. *Id.* at col. 5, ll. 8–34. According to the inventors, the recited two-rule method for updating user profiles was an improvement over prior art systems, which updated user profiles but “offer[ed] little in the way of user control and personali[z]ation of the profile update process itself.” *Id.* at col. 2, ll. 23–24; *see generally id.* at col. 1, line 56, through col. 2, line 19.

The '105 patent contains 10 claims; the first and tenth are independent claims. Claim 1 is an apparatus claim, and claims 2 through 9 depend from that claim. Claim 10 is a method claim. It recites:

¹ Early in the case, the defendants moved to dismiss BT's claims brought under four of the six originally asserted BT patents on the ground that those claims were not patent eligible under section 101. *See* Dkt. No. 25 at 13-17. I granted the defendants' motion as to those four patents. *Brit. Telecomms. PLC v IAC/InteractiveCorp.*, 381 F. Supp. 3d 293, 308–21 (D. Del. 2019). The defendants also moved to dismiss BT's claims under the two remaining patents, including the '105 patent, on the ground that BT's first amended complaint failed to plead facts that made infringement of those patents plausible. Dkt. No. 25 at 7–9. I denied that motion. *Brit. Telecomms.*, 381 F. Supp. 3d at 299–303. Upon BT's request, I severed the count involving one of the four patents that had been dismissed based under section 101, and BT took an appeal from my ruling on that patent. The Federal Circuit affirmed the order dismissing that patent. *Brit. Telecomms. PLC v. IAC/InteractiveCorp.*, 813 F. App'x 584 (Fed. Cir. 2020). Following a reexamination of the '105 patent and an inter partes review of the other remaining patent in the case, only claim 10 of the '105 patent was left for adjudication. *See* Dkt. No. 322.

A method of updating a user profile, the user profile being suitable for use in providing customized services to a respective user, the method comprising:

- (i) storing a first set of rules;
- (ii) generating a set of personalized rule weightings according to a second set of rules and with reference to a set of user preference data;
- (iii) receiving event statistics relating to a user's activity; and
- (iv) applying an inference engine to infer and output at least one update to a profile for the user according to said first set of rules weighted according to said generated set of personalized rule weightings, using said received event statistics.

I previously construed (1) “user profile” to mean “stored data elements associated with a user”; (2) “user preference data” to mean “data reflecting user preferences that is used to personalize a part of the process for updating the user profile”; (3) “personalized rule weightings” to mean “weights that are derived from the user preference data and are applied to the output of the first set of rules”; (4) “inference engine” to mean “a software program that draws inferences or conclusions by applying rules to information”; and (5) “event statistics relating to a user's activity” to mean “information, often in statistical form, reflecting user activity.” Dkt. No. 131 at 4–15, 19–20. I found the terms “first set of rules” and “second set of rules” to be readily comprehensible without the need for construction, although I noted that the term “rules” can accurately be defined as “instructions.” *Id.* at 9–10.

II. LEGAL STANDARD

A district court “shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). A factual dispute is genuine and material if a reasonable factfinder could return a verdict for the nonmoving party. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986).

On an issue as to which the moving party bears the burden of proof at trial, as is the case for this motion, the party seeking summary judgment must “establish the absence of a genuine factual issue.” *Resol. Tr. Corp. v. Gill*, 960 F.2d 336, 340 (3d Cir. 1992). If the motion does not persuasively establish that no factual issue exists, summary judgment should be denied “even if no opposing evidentiary matter is presented.” *Id.* Once the moving party with the burden of proof makes a showing that there is no genuine factual issue, that party is entitled to summary judgment “unless the non-moving party comes forward with probative evidence that would demonstrate the existence of a triable issue of fact.” *In re Bressman*, 327 F.3d 229, 238 (3d Cir. 2003); see *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986); *Anderson*, 477 U.S. at 250.

III. DISCUSSION

A. Section 101: General Principles

Section 101 of the Patent Act defines patent-eligible subject matter. It states: “Whoever invents or discovers any new and useful process, machine, manufacture or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” 35 U.S.C. § 101. The Supreme Court has interpreted that provision to carve out exceptions to that broad characterization of patentable subject matter for “[l]aws of nature, natural phenomena, and abstract ideas.” *Alice Corp. Pty. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (quoting *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)).

The framework for determining whether a patent is directed to an unpatentable abstract idea is well settled. The Supreme Court’s decision in *Alice* established the now-familiar two-step test for patentability in that context. The first step requires the court to examine the “focus” of the claim, i.e., its “character as a whole,” in order to determine whether the claim at issue is directed to an “abstract idea.” *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018); *Internet*

Patents Corp. v. Active Network, Inc., 790 F.3d 1343, 1348 (Fed. Cir. 2015). The second step entails determining whether the claim contains an “inventive concept” that removes the claimed subject matter from the realm of abstraction. *Alice*, 573 U.S. at 217–18; *see also Mayo Collaborative Servs. v. Prometheus Lab’ys, Inc.*, 566 U.S. 66, 72–73 (2012); *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016).

1. Abstract Idea

Neither the Supreme Court nor the Federal Circuit has ventured a single, comprehensive definition of an “abstract idea.” *See Alice*, 573 U.S. at 221 (“[W]e need not labor to delimit the precise contours of the ‘abstract ideas’ category in this case.”); *Elec. Power Grp.*, 830 F.3d at 1354 (“We need not define the outer limits of ‘abstract idea.’”); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016) (“The Supreme Court has not established a definitive rule to determine what constitutes an ‘abstract idea’ sufficient to satisfy the first step of the *Mayo/Alice* inquiry. Rather, both this court and the Supreme Court have found it sufficient to compare claims at issue to those claims already found to be directed to an abstract idea in previous cases.”); *Beteiro, LLC v. Draftkings Inc.*, 104 F.4th 1350, 1356 (Fed. Cir. 2024) (“[T]he decisional mechanism courts now apply [to Section 101 cases] is to examine earlier cases in which a similar or parallel descriptive nature can be seen.”) (quoting *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1295 (Fed. Cir. 2016)). In place of a unitary test, what has emerged from the cases applying section 101 is a group of related principles that can be applied in gauging whether a patent claim is directed to an abstract idea. Those general principles that most directly apply to this case are the following:

First, the courts have characterized “method[s] of organizing human activity” as abstract. *See Alice*, 573 U.S. at 220; *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1285 (Fed. Cir. 2018). For example, courts have identified fundamental and longstanding economic and business practices

as abstract ideas. *See Alice*, 573 U.S. at 219; *SAP Am.*, 898 F.3d at 1168; *Intell. Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1313 (Fed. Cir. 2016). Such business practices can include relatively specific functions such as disseminating regionally broadcast content to users outside the region, *see Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1261–62 (Fed. Cir. 2016); classifying an image and storing the image based on its classification, *see In re TLI Commc’ns LLC Pat. Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016); or managing a bingo game, *see Planet Bingo, LLC v. VKGS LLC*, 576 F. App’x 1005, 1008 (Fed. Cir. 2014).

Second, applying that principle to patents that claim the use of computers in performing particular activities, the Supreme Court and the Federal Circuit have held that simply reciting the use of computers to perform activities that can readily be performed by humans does not make those activities patent eligible. *See Alice*, 573 U.S. at 223 (“[M]ere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.”); *BSG Tech*, 899 F.3d at 1285 (“If a claimed invention only performs an abstract idea on a generic computer, the invention is directed to an abstract idea at step one” of *Alice*.); *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093 (Fed. Cir. 2016); *TLI*, 823 F.3d at 612; *Enfish*, 822 F.3d at 1338. That includes activities that can be performed by the human mind or with pencil and paper. *See Broadband iTV, Inc. v. Amazon.com, Inc.*, 113 F.4th 1359, 1367 (Fed. Cir. 2024); *In re Killian*, 45 F.4th 1373, 1379 (Fed. Cir. 2022); *Personal Web Techs. LLC v. Google LLC*, 8 F.4th 1310, 1316 (Fed. Cir. 2021); *Elec. Power Grp.*, 830 F.3d at 1354 (“[W]e have treated analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category.”).

Third, as applied to computer applications, courts have looked to whether the claim in question is directed to an improvement in computer technology as opposed to simply providing for

the use of a computer to perform “tasks for which a computer is used in its ordinary capacity.” *Enfish*, 822 F.3d at 1336. The Supreme Court made that point in *Alice*, where it stated that the purported invention at issue in that case was not patent eligible because the claimed methods did not “improve the functioning of the computer itself” or “effect an improvement in any other technology or technical field.” *Alice*, 573 U.S. at 225; *see also Affinity Labs of Tex.*, 838 F.3d at 1262. The Federal Circuit has restated that principle repeatedly, and it is by now well established in the law of patent eligibility. *See, e.g., United Servs. Auto. Ass’n v. PNC Bank N.A.*, 139 F.4th 1332, 1337 (Fed. Cir. 2025); *Recentive Analytics, Inc. v. Fox Corp.*, 134 F.4th 1205, 1212 (Fed. Cir. 2025); *Chewy, Inc. v. Int’l Bus. Machs. Corp.*, 94 F.4th 1354 1366 (Fed. Cir. 2024); *Trinity Info Media, LLC v. Covalent, Inc.*, 72 F.4th 1355, 1362–63 (Fed. Cir. 2023); *Int’l Bus. Machs. Corp. v. Zillow Grp.*, 50 F.4th 1371, 1377–78 (Fed. Cir. 2022); *Universal Secure Registry LLC v. Apple Inc.*, 10 F.4th 1342, 1357 (Fed. Cir. 2021); *Yu v. Apple Inc.*, 1 F.4th 1040, 1044 (Fed. Cir. 2021); *TecSec, Inc. v. Adobe, Inc.*, 987 F.3d 1278, 1293 (Fed. Cir. 2020) (citing numerous cases); *Customedia Techs., LLC v. Dish Network Corp.*, 951 F.3d 1359, 1363 (Fed. Cir. 2020); *FairWarning IP*, 839 F.3d at 1095; *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1316 (Fed. Cir. 2016).

Where the claims at issue provide for an improvement in the operation of a computer, such as a new memory system, a new type of virus scan, or a new type of interface that makes a particular computer function more accessible, the Federal Circuit has found the claims to be patent eligible. *See, e.g., Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999, 1007–11 (Fed. Cir. 2018) (methods for making electronic spreadsheets more accessible); *Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356, 1361–63 (Fed. Cir. 2018) (improved display devices); *Finjan, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299, 1303–06 (Fed. Cir. 2018) (novel method of virus scanning); *Visual Memory*

LLC v. NVIDIA Corp., 867 F.3d 1253, 1258–60 (Fed. Cir. 2017) (improved computer memory system).

Fourth, also in the field of computer-related applications, the Federal Circuit has held that claims “directed to collection of information, comprehending the meaning of that collected information, and indication of the results, all on a generic computer network operating in its normal, expected manner” are abstract. *Zillow Grp.*, 50 F.4th at 1377–78 (quoting *In re Killian*, 45 F.4th 1373, 1380 (Fed. Cir. 2022)); *see also SAP Am.*, 898 F.3d at 1167 (“[C]laims focused on ‘collecting information, analyzing it, and displaying certain results of the collection and analysis’ are directed to an abstract idea.”) (quoting *Elec. Power Grp.*, 830 F.3d at 1353–54); *Trading Techs. Int’l, Inc. v. IBG, LLC*, 921 F.3d 1378, 1385 (Fed. Cir. 2019); *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1345 (Fed. Cir. 2018); *Fair Warning IP*, 839 F.3d at 1093.

Fifth, in determining whether a method claim is directed to an abstract idea, the Federal Circuit has focused on whether the claim is “purely functional and generic” in nature or is sufficiently concrete or specific to be directed to a patent-eligible process rather than a patent-ineligible result. *Alice*, 573 U.S. at 226. For example, in *SAP America*, 898 F.3d at 1167, the court asked whether the claim had “the specificity required to transform [it] from one claiming only a result to one claiming a way of achieving it.” To answer that question, the Federal Circuit has directed courts to “look to whether the claims focus on a specific means or method, or are instead directed to a result or effect that itself is the abstract idea and merely invokes generic processes and machinery.” *Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1337 (Fed. Cir. 2017); *see also Hawk Tech. Sys., LLC v. Castle Realty, LLC*, 60 F.4th 1349, 1358 (Fed. Cir. 2023) (claims “lack ‘sufficient recitation of *how* the purported invention improve[s] the functionality’ of video surveillance systems and are ‘recited at such a level of result-oriented generality that those claims amount[] to a mere

implementation of an abstract idea”) (quoting *Koninklijke KPN N.V. v. Gemalto M2M GmbH*, 942 F.3d 1143 (Fed. Cir. 2019)); *McRO*, 837 F.3d at 1314 (“We . . . look to whether the claims in these patents focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery.”); *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1244 (Fed. Cir. 2016) (claim that “calls for the desired result of associating a customer’s order with said customer, and does not attempt to claim any method for achieving that result” is ineligible); see generally *Diamond v. Diehr*, 450 U.S. 175, 182 n.7 (1981) (A patent may issue “for the means or method of producing a certain result or effect, and not for the result or effect produced.” (citation omitted)); *Corning v. Burden*, 56 U.S. 252, 268 (1853) (patents are granted “for the discovery or invention of some practicable method or means of producing a beneficial result or effect . . . and not for the result or effect itself.”); *Le Roy v. Tatham*, 55 U.S. 156, 175 (1853) (“A patent is not good for an effect, or the result of a certain process” because such patents “would prohibit all other persons from making the same thing by any means whatsoever.”).

Sixth, and relatedly, “the concern that drives” the judicial exceptions to patentability is “one of preemption.” *Alice*, 573 U.S. at 216; see also *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 766 (Fed. Cir. 2019); *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015). In determining whether a particular invention is directed to an abstract idea, it is therefore important to ask whether according patent protection to the claimed subject matter would have a broad preemptive effect on future innovation in the same field. See *Accenture Glob. Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1341 (Fed. Cir. 2013).

2. Inventive Concept

If the court determines that a claim is directed to an abstract idea, the court proceeds to *Alice* step two. That step requires the court “to examine the elements of the claim to determine whether it contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 573 U.S. at 221 (quoting *Mayo*, 566 U.S. at 72, 78–79).

The “inventive concept” is “an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’” *Id.* at 217–18 (quoting *Mayo*, 566 U.S. at 72). Moreover, courts have emphasized that it is not sufficient merely to implement an abstract idea using “well-understood, routine, [and] conventional activities previously known in the industry.” *Coop. Ent., Inc. v. Kollektive Tech., Inc.*, 50 F.4th 127, 130 (Fed. Cir. 2022) (quoting *Alice*, 573 U.S. at 225). That is, *Alice* step two requires the claimed invention to do more than combine known techniques that “yield[] only expected results.” *Universal Secure Registry*, 10 F.4th at 1353. Instead, the claim or claims in question must “focus on a specific means or method that improves the relevant technology.” *Weisner v. Google LLC*, 51 F.4th 1073, 1083 (Fed. Cir. 2022) (citations omitted). In particular, the Federal Circuit has asked whether the claim or claims at issue are “directed to a technological solution to a technological problem.” *cxLoyalty, Inc. v. Maritz Holdings Inc.*, 986 F.3d 1367, 1378 (Fed. Cir. 2021); *see also BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350–51 (Fed. Cir. 2016); *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257–58 (Fed. Cir. 2014).

The preemptive effect of the asserted claims is also a relevant consideration at *Alice* step two. In a recent case, the Federal Circuit explained the relationship between preemption and the presence of an inventive concept:

We have explained that claims for methods that “improve[] an existing technological process” include an inventive concept at step two. *BASCOM*, 827 F.3d at 1350–51 (quoting *Alice*, 573 U.S. at 221, 223). And claims that “recite a specific, discrete implementation of the abstract idea” rather than “preempt[ing] all ways of” achieving an abstract idea using a computer may include an inventive concept. *Id.* at 1350. But claims to “an abstract idea implemented on generic computer components, without providing a specific technical solution beyond simply using generic computer concepts in a conventional way” do not pass muster at step two. *Id.* at 1352.

Killian, 45 F.4th at 1382 (cleaned up). Thus, whether the claims recite “a specific, discrete implementation of the abstract idea” rather than preempting all implementations of that idea is an appropriate consideration in the step two inquiry. *Id.*; see also *ChargePoint*, 920 F.3d at 769 n.4 (“We have also considered preemption at step two of the analysis. See *BASCOM Glob. Internet Servs*, 827 F.3d 1341, 1350 (Fed. Cir. 2016).”).

B. Application

1. Alice Step One

a. Analysis of Claim 10

The *Alice* step one inquiry requires consideration of “what the patent asserts to be the focus of the claimed advance over the prior art.” *Yu*, 1 F.4th at 1043 (citation omitted); *Koninklijke KPN*, 942 F.3d at 1149; *Affinity Labs of Tex.*, 838 F.3d at 1257. IAC argues that claim 10 of the ’105 patent is directed to the well-established mental process of updating data associated with a person, i.e., learning about people. BT responds that IAC’s characterization of claim 10 is too broad and ignores the claim’s specific requirements. According to BT, the claim is directed to a specific method of personalizing the process for updating a profile, which is a method that cannot be performed by the human mind.

In the background section of the specification, the ’105 patent describes the prior art method of updating user profiles. That known method, according to the specification, uses a “fuzzy inference

engine,” which infers updates to user profiles according to predefined “fuzzy rules” and fuzzy sets of event statistics (i.e., data about user activity or user preferences). ’105 patent at col. 1, ll. 56–64; col. 2, ll. 19–22. In the prior art references, according to the specification, the fuzzy rules are applied with equal importance over time. *Id.* at col. 13, ll. 14–16; *see also id.* at col. 2, ll. 19–24. The specification explains that the method recited in claim 10, like the prior art methods, uses a first set of rules to develop user profiles. According to the specification, however, the patented invention departs from the prior art by using a second set of rules to update those profiles. *Id.* at col. 2, ll. 19–24; col. 13, ll. 9–16. Those rules, referred to as “meta-rules” or “rules about rules,” are used to adjust rule weights and to implement user profile updates. *Id.* at col. 5, ll. 8–10. The updates are based on “user preference data,” which is used to adjust the weights assigned to the values that were derived from the application of the first set of rules. *Id.* at col. 5, ll. 20–28.

The method recited in claim 10 is directed to updating a user profile in order to provide “customized services to a respective user.” ’105 patent, claim 10, preamble. The claim is not easy to parse, but a fair (if simpler) description of what the claim covers is the following: A method of updating a user profile, comprising (1) using data, such as a user’s stated preferences, to create a profile for the user according to a stored first set of rules; (2) using a second set of rules (the “meta-rules”) to generate a set of weightings for the application of the first set of rules by discerning the user’s preferences in practice based on statistics relating to the user’s activity; and (3) drawing inferences about the user’s preferences based on the weighted first set of rules. Notably, neither the specification nor claim 10 suggests anything about what the two “sets of rules” consist of.

The claim recites that an inference engine is used to infer and update the user's profile.² The term "inference engine," as used in the patent, is very broad and is defined by its function. In an earlier order, I construed "inference engine" to mean "a software program that draws inferences or conclusions by applying rules to information." Dkt. No. 131 at 15. While the patent generally contemplates that the invention will be implemented on a computer, the software implementation of the "inference engine" is technically just a preferred embodiment of the invention. *See* '105 patent, Fig. 6 and col. 7, ll. 37–50. The claimed advance over the prior art is the use of an updating process that is personalized and updated by weighting various factors according to the user's activity over time. *See* Dkt. No. 161 at 2 (claim construction order finding claim is directed to a method for updating user profiles based on personalized reasoning about user activity).

To understand claim 10, it is useful to examine a real-world example drawn from the general subject matter of this case that would satisfy the limitations of claim 10 of the '105 patent at a basic level of complexity. Consider a hypothetical online dating service seeking to identify prospective partners for a female user of the service based on characteristics that the user would likely find attractive. The service could store and use a first set of rules, which would satisfy limitation (i) of claim 10. In a rudimentary form, that set of rules could apply the user's expressed preferences and identify potential candidate matches that are consistent with those preferences. Initially, the service could ask the user about what features the user finds attractive in a partner. For example, the service might ask the user to state preferences for educational level, age, and height. The user's answers would then be recorded as the "set of user preference data" as recited in limitation (ii) of claim 10.

² Unlike the other claims of the '105 patent, claim 10 is directed to a method, not an apparatus. Also, unlike claims 4 and 5, claim 10 requires simply an "inference engine," not a "fuzzy inference engine." The portions of the patent specification and claims that are directed to fuzzy inferences and fuzzy inference engines are therefore not relevant to claim 10.

If the individual stated a preference for men between 25 and 35 years of age, more than six feet tall, and with at least a college degree, the service would apply the first set of rules (by identifying candidates with characteristics generally consistent with the user's preferences) to show men meeting most or all of the user's stated preferences.

Suppose that the dating service presented the user with a set of potential candidate matches in which the men varied in age from 20 to 40, in which there were individuals with and without college degrees, and in which some of the candidates were more than six feet tall and others were not. Suppose further that the user selected exclusively candidates with college degrees; mostly (but not all) candidates under 35 years of age; and a number of candidates who were under six feet tall. Those selections would constitute "event statistics" within the meaning of limitations (iii) and (iv) of claim 10.

The service would then apply a second set of rules. In a basic form, that second set of rules could direct that the user's stated preferences be updated to reflect the user's demonstrated preferences, as shown by the user's actual responses to potential candidate matches. The result of applying the second set of rules would be that the user's preferences would now reflect that a prospective candidate's educational level was highly important to the candidate, his age was somewhat important, and his height was not particularly important. The user's profile would then be updated to take account of the preferences revealed by the user's actual selections. In other words, applying the second set of rules would result in "personalized rule weightings" as required by limitation (ii) and "updates" to the initial user profile, as required by the preamble to claim 10 of the '105 patent.

That hypothetical system for updating a user's profile would appear to infringe claim 10. If that hypothetical system would be patent ineligible, it follows that claim 10 would be patent

ineligible, even as applied to more elaborate embodiments of the underlying invention. The question at step one of the *Alice* inquiry, then, is whether such a system is directed to an abstract idea as that concept has been understood in cases applying section 101.

I conclude that it is. For the reasons explained below, claim 10 has all the characteristics of abstract ideas that courts have associated with patent-ineligible inventions, as summarized in section III.A.1, above.

b. Mental Processes

Stripped to its essentials, claim 10 describes a process that could easily be performed in the human mind. In fact, that process is often performed when, for example, a salesman hears a customer express a preference for a particular type of product, but then, upon observing the customer's behavior, concludes that the customer's true preferences are different from those the customer articulated at the outset. In that setting, the first rule would instruct the salesman to take the customer's expressed preferences at face value, such as when the customer, upon entering an automobile showroom, tells the salesman that he is interested in an inexpensive but fuel-efficient sedan. The second rule would direct the salesman to reweigh the customer's preferences upon observing the customer's actual behavior, such as when the customer appears to be studying the sports cars in the showroom or asks to test drive a sports car, those behaviors being the "received event statistics" recited in claim 10. The function performed by the claimed "inference engine"—i.e., suggesting that the salesman listen closely to the customer's expressed preferences, but then reweigh those expressed preferences in light of the customer's reactions upon being exposed to various choices in the showroom or during a test drive—could be captured in a sales manual or the salesman's own prior experience. The end product, in the words used in claim 10, would be a "set of personalized rule weightings."

c. A Method of Organizing Human Activity: Targeted Advertising and Matchmaking

To begin with, assessing and updating data reflecting an individual’s interests and attributes is a well-known method of organizing human activity; in varying forms, it is a common practice in familiar fields such as merchandising, targeted advertising, and matchmaking.

The Federal Circuit’s decision in *Trinity Info Media, LLC v. Covalent, Inc.*, 72 F.4th 1355 (Fed. Cir. 2023), involved patent claims similar to the one in this case and is highly instructive. The patents in *Trinity Info Media* were directed to methods and systems for matching users based on information obtained by progressively polling the users. The two patents in suit were directed to “receiving user information from a user to generate a unique user profile,” followed by “progressively poll[ing] and match[ing] the user against all other users after each query item.” *Id.* at 1359 (quoting from U.S. Patent No. 9,087,321 at col. 1, ll. 36–38, and U.S. Patent No. 10,936,685 at col. 1, ll. 48–59). The patents then provided for users to be matched “based upon all of the polls taken by the user and all other users.” U.S. Patent No. 9,087,321 at col. 1, ll. 48–49. Several of the claims of the patent at issue, in particular, recited providing users with sequential polling questions and “cumulatively comparing the selected answer for the first polling question and the next polling question against the selected answers of the other users to generate a likelihood of match between the user and each of the other users.” *Id.*, claim 2; *see also id.*, claims 11, 12, 20, and 21. Thus, the patented system in *Trinity* “cumulatively collects and immediately compares data.” *Id.* at col. 6, ll. 20–29.

The district court held the patents in *Trinity Info Media* ineligible under section 101, and the Federal Circuit affirmed. The Federal Circuit characterized the claims in that case as “(1) receiving user information; (2) providing a polling question; (3) receiving and storing an answer; (4) comparing

that answer to generate a ‘likelihood of match’ with other users; and (5) displaying certain user profiles based on that likelihood.” 72 F.4th at 1362. The court characterized the patents before it as focused on collecting information, analyzing it, and displaying certain results, which “places them in the familiar class of claims ‘directed to a patent-ineligible concept.’” *Id.* Moreover, the court noted that the patent specifications in that case focused on improving “existing polling systems by performing progressive polling.” *Id.* at 1363. As in the updating process in this case, the “progressive polling” featured by the patents in *Trinity Info Media* matched individuals based on “all polls the user previously answered (and unique identifications).” *Id.* at 1365.

Like the patent at issue in this case, the patents at issue in *Trinity Info Media* begin with a user profile and then, using data over time, update the information regarding the user to make the matches more accurate. Both the *Trinity Info Media* case and this one thus involve updating data regarding individual users’ profiles in order to customize services offered to a customer—a function commonly referred to as “targeted advertising.” To the extent that claim 10 is not directed at classic “targeted advertising,” the practice of matching individuals for compatibility, which is the subject matter of the infringement allegations in this action, is very similar to targeted advertising, in that both fields involve gathering information about groups of people and drawing inferences from that information about the people and their likely interests.

The Federal Circuit’s targeted advertising cases point strongly toward the conclusion that claim 10 of the ’105 patent is directed to an abstract idea. The Federal Circuit’s recent decision in *Broadband iTV, Inc. v. Amazon.com, Inc.*, 113 F.4th 1359 (Fed. Cir. 2024), which involved a form of targeted advertising, is particularly pertinent. *Broadband* involved several patents, one of which related to electronic programming guides for video-on-demand television systems. That patent was directed to “collecting and using viewing history data to recommend categories of video content” to

a user. *Id.* at 1371. The specification described the invention as maintaining a list of names, tracking a user's history, and reordering the names based on the user's history. *Id.* at 1364, 1371. The court found the representative claim to be directed to an abstract type of targeted advertising, which the court held was not patent-eligible. *See id.* at 1371–72. That conclusion was based in part on the fact that the claim did not disclose how to perform any of the required steps (such as how to maintain a list of names), but instead described the claimed method in purely functional terms. In addition, the court relied on the fact that “determining what content to recommend based on user consumption history” could be performed by a human with pen and paper. *Id.* at 1371.

Importantly, not only was the patent in *Broadband* directed to personalization of the user's individual profile, but it also provided for updating the user's personal profile over time. *See id.* at 1365. Thus, one of the patents at issue in *Broadband* recited, *inter alia*, that the TV service provider would determine an order of relevance of categories of program selections by individual viewers

based at least in part on said respective individual viewer's selection data from said one or more previous sessions as stored in the usage history database and reflecting said respective individual viewer's preferences, [and then] . . . at the start of each new session . . . reordering a current display listing of the category names for categories of video-on-demand programs on said respective individual view's viewer-individualized electronic program guide based at least in part on said determined order of relevance.

Id. That language from one of the claims at issue in *Broadband* indicates that the claimed program infers the user's preferences based on the user's history of selections and that it updates the user's preference profile in light of the user's selections over time. Thus, the claims in *Broadband*, which the Federal Circuit held ineligible for patenting, were directed to a system that derived inferences about program preferences that were personalized to individual users and were updated over time in light of those individual users' choices. In that respect, the Federal Circuit's decision in *Broadband* substantially undermines BT's contention that claim 10 of the '105 patent is distinguishable from

other cases involving targeted advertising on the ground that claim 10 is directed to the personalization of individual users' profiles.

BT makes the further argument that claim 10 contemplates not only updating the user's profile, but personalizing the profile updating process itself. Dkt. No. 337 at 2. It is unclear exactly what that means. But what the claim itself says is that personalized rule weightings will be generated according to a second set of rules and with reference to user preference data, resulting in the generation of an update to the profile for the user. IAC responds that both the claim at issue in *Broadband* and the claim at issue in this case "simply process collected data using basic logic to rank or re-rank recommendations." Dkt. No. 336 at 4. That characterization of the limitations of claim 10, although reduced to the simplest terms, is nonetheless accurate. The user profile generated by applying the first set of rules to data is updated by being weighted according to the second set of rules using additional data.

The Federal Circuit has found other claims that sought to tailor recommendations to individual users to be patent ineligible. For example, *Intellectual Ventures I LLC v. Capital One Bank*, 792 F.3d 1363 (Fed. Cir. 2015), addressed a system for presenting web pages to a user, such that the web page was tailored to the individual user based on the user's personal characteristics. The court noted that at step one of the *Alice* framework, "it is often useful to determine the breadth of the claims in order to determine whether the claims extend to cover a 'fundamental . . . practice long prevalent in our system . . .'" *Id.* at 1369. The court characterized the invention in that case as related to "customizing information based on (1) information known about the user and (2) navigation data." *Id.* The patentee in *Capital One Bank* acknowledged that tailoring content based on the viewer's location or address would satisfy the limitation requiring that the method depict portions of the web as a function of the user's personal characteristics. *Id.* That sort of information

tailoring, the court held, is “a fundamental practice long prevalent in our system.” *Id.* (quoting *Alice*, 573 U.S. at 219); *see also Beteiro*, 104 F.4th at 1356–57.

The same is true here on very similar facts. The claimed method begins with a user’s personal profile and updates that profile based on data (i.e., “event statistics”), such as the user’s actions that indicate the user’s interests. Like the method at issue in *Capital One Bank*, the assessment of an individual’s preferences “for use in providing customized services to a respective user,” as provided in claim 10, is a common and longstanding practice in the field of merchandising and therefore qualifies as an abstract idea.

A later “targeted advertising” case from the Federal Circuit, *Bridge and Post, Inc. v. Verizon Communications, Inc.*, 778 F. App’x 882 (Fed. Cir. 2019), underscored the point that using information to develop a profile of an individual and using that profile to target the individual’s interests is an abstract idea. The first patent at issue in the *Bridge and Post* case was directed to a method for providing directed media to a user on a network. The patent recited retrieving historic information about a user’s pattern of usage of a network access device, generating a user profile based on that historic information, analyzing the stored information, and directing content to the user that is customized based on the user’s profile. *Id.* at 886–87.

The court noted that targeted marketing, i.e., tailoring information based on provided data, is a “fundamental practice” that was “originally developed to increase the effectiveness of advertisements placed in traditional media, such as radio, television, and printed newspapers and magazines.” *Id.* at 887. The court then explained that the steps of analyzing the information and placing directed media based on that analysis “are nothing more than a computer-implementation of targeted marketing over the Internet.” *Id.* And the remaining limitations, the court held, such as generating a user profile and storing that profile, “are generic computer functions performed in the

service of implementing targeted marketing, and do not change the focus of the claim.” *Id.* Citing the Federal Circuit’s prior decision in *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343 (Fed. Cir. 2015), the court ruled that claims directed to customizing information based on information known about the user and specific data are directed to abstract ideas, and that the “recitation of additional generic network elements does not change its character as a whole.” 778 F. App’x at 888. As a result, the court concluded, the claims of the patent “are directed to the abstract idea of using persistent identifiers to implement targeted marketing.” *Id.*

Other cases involving targeted advertising are to the same effect. *See Customedia Techs.*, 951 F.3d at 1365 (“[T]he claimed invention is at most an improvement to the abstract concept of targeted advertising wherein a computer is merely used as a tool.”); *In re Morsa*, 809 F. App’x 913, 917 (Fed. Cir. 2020) (“[T]argeted advertising and bidding to display the advertising . . . are both abstract ideas relating to customizing information based on the user and matching them to the advertiser.”); *Yieldmo, Inc. v. Teads, Inc.*, No. 25 Civ. 737, 2025 WL 2042354, at *7 (S.D.N.Y. July 21, 2025) (“[T]he claims are directed to an ineligible abstract idea: specifically, advertising responsive to consumer activity.”); *Integrated Advertising Labs, LLC v. Revcontent LLC*, 644 F. Supp. 3d 1031, 1039 (M.D. Fla. 2022) (“Targeted advertising is an abstract idea because targeted advertising is a fundamental, routine, and enduring practice long used in marketing.”); *Guvera IP Pty Ltd. v. Spotify USA Inc.*, No. 21 Civ. 4544, 2022 WL 4537999, at *7 (S.D.N.Y. Sept. 28, 2022) (“[E]ach step in this process is a mental one. A human can manually tag content and update those tags; a human can compare tags of different pieces of content; a human can compile lists of content pieces with similar tags. . . . [A]utomating these steps does not render the process patentable; it merely makes the process more efficient.”), *aff’d*, No. 2023-1493, 2024 WL 1433505 (Fed. Cir. Apr.

3, 2024); *Quantum Stream, Inc. v. Charter Commc'ns, Inc.*, 309 F. Supp. 3d 171, 184 (S.D.N.Y. 2018) (patents “directed at the abstract idea of custom advertising” are patent ineligible).

Several district court cases, both from this district and others, deal directly with the subject matter of this case, i.e., “matching people based on criteria such as personality traits or location.” *Jedi Techs., Inc. v. Spark Networks, Inc.*, No. 1:16-cv-1055, 2017 WL 3315279, at *7 (D. Del. Aug. 3, 2017). The court in the *Jedi* case held that the invention, which was drawn to “a method and system for using predetermined preferences/characteristics to ascertain personal compatibility between network or chat room participants based upon profile information” was ineligible for patenting under section 101. *Id.* The court noted that “the concept of matchmaking is certainly not novel and has been performed by humans for a very long time.” *Id.* It added that practicing the matchmaking method on a computer did not render that activity any less abstract, because the patents “fail[ed] to identify any specific improvement to the functionality of a computer.” *Id.* at *8. *See also Walker Digital, LLC v. Google, Inc.*, 66 F. Supp. 3d 501, 508 (D. Del. 2014) (holding that “the basic concept of controlled exchange of information about people as historically practiced by matchmakers and headhunters” is drawn to an abstract idea); *Perry St. Software, Inc. v. Jedi Techs., Inc.*, 548 F. Supp. 3d 418, 432 (S.D.N.Y. 2021) (“[T]he patent claims do no more than ‘automate’ a traditional process that has long been performed manually—helping people find someone with whom to enter a relationship. Asking and answering questions to determining compatibility is not novel. It has been one of the primary ways that humans have attempted to find suitable partners for generations. . . . Indeed, these steps perfectly describe a process that ‘can be performed in the human mind, or by a human using pen and pencil.’” (citations omitted)); *Ghaly Devices LLC v. Humor Rainbow, Inc.*, 443 F. Supp. 3d 421, 429, 432 (S.D.N.Y. 2020) (“Claim 42 is directed to an abstract idea because it is drawn to the abstract ideas of human compatibility and matchmaking. . . . [T]he

essence of Claim 42 is directed to the abstract concept of matchmaking. That Claim 42 proposes that this process should be performed on a computer is not sufficient to make it non-abstract.”); *Lumen View Tech LLC v. Findthebest.com, Inc.*, 984 F. Supp. 2d 189, 198 (S.D.N.Y. 2013) (“The ’073 patent claims the idea of bilateral and multilateral matchmaking using a computer in the context of a financial transaction or an enterprise. It is preemptive in the broadest sense. And its only real limitation, the use of a computer—constitutes mere post-solution application of an abstract idea to a common context.”).

d. Collecting and Analyzing Information

The cases discussed above are specific applications of a more general principle applied by the Federal Circuit, which has “treated analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category,” and has ruled that “merely presenting the results of abstract processes of collecting and analyzing information, without more . . . is abstract as an ancillary part of such collection and analysis.” *Elec. Power Grp.*, 830 F.3d at 1353–54; *see also United Servs. Auto. Ass’n*, 139 F.4th at 1337; *Trinity Info Media*, 72 F.4th at 1362; *FairWarning IP*, 839 F.3d at 1093.

This case is governed by that principle. In the *Electric Power Group* case, the Federal Circuit held that collecting data, analyzing the data, and displaying information based on that analysis constitutes an abstract idea. The method claimed in this case begins with collecting and storing data about a person’s interests, and then provides for collecting additional data, analyzing that data, and producing an outcome based on the analysis of that additional data. That sequence of steps is quite similar to the sequence of steps involved in the *Electric Power* case and its progeny.

The Federal Circuit has emphasized that in analyzing the patent eligibility of a claim, it is important to focus on the language of the claim. While the specification can be consulted to

determine the meaning of particular terms used in the claim, it is the claim itself that must be patent eligible. *See United Servs. Auto. Ass’n*, 139 F.4th at 1337 (“We focus on the claims, not the specification, to determine eligibility, because ‘the level of detail in the specification does not transform a claim reciting only an abstract concept into a patent-eligible system or method.’”); *Accenture Glob. Servs. GmbH*, 728 F.3d at 1345 (same); *Hawk Tech. Sys., LLC v. Castle Retail, LLC*, 60 F.4th 1349, 1357 (Fed. Cir. 2023) (“The analysis at step one must focus on the claim language.” (citation omitted)). Features that are not claimed “are irrelevant as to step 1 or step 2 of the *Alice* analysis.” *Am. Axle & Mfg., Inc. v. Neapco Holdings LLC*, 967 F.3d 1285, 1293 (Fed. Cir. 2020); *ChargePoint*, 920 F.3d at 769 (“[A]ny reliance on the specification in the § 101 analysis must always yield to the claim language. . . . [T]he specification cannot be used to import details from the specification if those details are not claimed.”).

What is notable about claim 10 is what the claim does not say. Claim 10 says nothing about what the first set of rules, the second set of rules, or the “personalized rule weightings” consist of, nor does it say anything about the nature of the “event statistics relating to a user’s activity.” And it does not recite any feature of the “inference engine” that might be considered novel. In essence, the claim simply states that the unspecified inference engine will update the user’s profile in an unspecified manner, according to an unspecified first set of rules, as weighted according to undefined “personalized rule weightings” that are produced in accordance with an unspecified second set of rules and unspecified “received event statistics.”

To be sure, the specification of the ’105 patent describes more complex embodiments. But claim 10 is far more general (and more abstract) than some of the embodiments described in the specification. Unlike those embodiments, the invention recited in claim 10 does no more than claim a method consisting of starting with a profile of a person consisting of certain characteristics of

interest and then modifying that profile based on additional information regarding those characteristics of the individual.

e. Improvements in Computer Technology

One of BT's principal arguments is that claim 10 of the '105 patent is directed to "an improvement in computer technology," Dkt. No. 241 at 10–15, since the "inference engine" recited in the asserted claim is assumed in the specification to be embodied in a computer program, *see* '105 patent, Figs. 2 & 6; col. 7, line 66; col. 11, ll. 3, 31–32; col. 13, ll. 22–23. But while claim 10 implicitly claims a computer, it is plainly not the case that the patent entails an improvement to a computer within the meaning of the Federal Circuit's cases on that subject.

As noted above, the Federal Circuit has repeatedly stated, in the context of patent eligibility, that while an improvement in computer technology may be patentable, an invention that simply employs a computer as a tool is not thereby rendered patent eligible. *See, e.g., Receptive Analytics*, 134 F.4th at 1212; *Zillow Grp.*, 50 F.4th at 1378; *In re Killian*, 45 F.4th at 1380; *Yu*, 1 F.4th at 1045 ("Here the claimed hardware configuration itself is not an advance"); *TecSec*, 978 F.3d at 1293; *Trading Techs.*, 921 F.3d at 1093; *ChargePoint*, 920 F.3d at 759; *Interval Licensing*, 896 F.3d at 1344; *Intellectual Ventures Iv. Capital One Fin. Corp.*, 850 F.3d 1332, 1340 (Fed. Cir. 2017); *Apple*, 842 F.3d at 1241.

The Federal Circuit in those cases has consistently rejected arguments of the sort BT makes. In light of the Federal Circuit's frequently articulated distinction between an invention that improves the operation of a computer and one that merely uses a computer as a tool, it is quite clear that this case falls on the "using computers as a tool" side of that line. Although BT seeks to analogize claim 10 to several cases from the Federal Circuit in which the inventions were found to be improvements to the functioning of a computer, those cases are very different from this one.

The Federal Circuit cases that BT relies on in support of its “improvements to a computer” argument are *Enfish v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016); *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016); *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253 (Fed Cir. 2017); *Finjan, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299 (Fed. Cir. 2018); *Ancora Tech., Inc. v. HTC Am., Inc.*, 908 F.3d 1343 (Fed. Cir.2018); and *SRI Int’l, Inc. v. Cisco Sys., Inc.*, 930 F.3d 1295 (Fed. Cir. 2019).

In each of those cases, the Federal Circuit held that the asserted claims were directed to an improvement in computer technology, not simply the use of well-known computer capabilities in service of other functions. *See Enfish*, 822 F.3d at 1333 (claims directed to a self-referential computer database that had numerous advantages over the conventional relational database); *McRO*, 837 F.3d at 1314 (claims directed to a specific asserted improvement in computer animation, i.e., the “automatic use of rules of a particular type”); *Visual Memory*, 867 F.3d at 1259 (claims directed to “an improved computer memory system, not to the abstract idea of categorical data storage” when claims require a memory system “‘having one or more programmable operational characteristics, said characteristics being defined through configuration by said computer based on the type of said processor,’ and ‘determin[ing] a type of data stored by said cache’”); *Finjan*, 908 F.3d at 1305 (claims recite specific steps in a virus scanning method that accomplish the desired result—i.e., generating a security profile that identifies suspicious code and linking it to a downloadable); *Ancora*, 908 F.3d at 1348–49 (claims recite a “specific technique that departs from earlier approaches to solve a specific computer problem [vulnerability of license-authorized software to hacking:] . . . [a] structure containing a license record is stored in a particular modifiable, non-volatile portion of the computer’s BIOS, and the structure in that memory location is used for verification by interacting with the distinct computer memory that contains the program to be verified”); *SRI*, 930 F.3d at 1303

(claims directed to “using a specific technique—using a plurality of network monitors that each analyze specific types of data on the network and integrating reports from the monitors—to solve a technological problem arising in computer networks: identifying hackers or potential intruders into the network”); *Weisner*, 51 F.4th at 1085–86 (claims “concern a new technique for prioritizing the results of a conventional search” that constitutes “more than just the concept of improving a web search using location history—it is a specific implementation of that concept”). These cases consistently apply the distinction between an invention that improves computer functionality and an invention that simply uses a computer as a tool.³

Some of the Federal Circuit cases addressing this issue have presented close questions as to whether an invention is directed to an improvement in computer functionality rather than simply to the use of a computer as a tool. *See Weisner v. Google LLC*, 51 F.4th 1075, 1088–91 (Fed. Cir. 2022) (Hughes, J., dissenting); *SRI*, 930 F.3d at 1312–13 (Lourie, J., dissenting); *Visual Memory*, 867 F.3d at 1262–64 (2017) (Hughes, J., dissenting). But this case is not one of them.

Claim 10 is directed to gathering information and analyzing it on an ongoing basis. Such a process, at least on a small or modest scale, can be, and often is, performed in the human mind. People may say—and even believe—that they prefer products (or even other people) with certain characteristics, but their behavior might suggest their actual unarticulated preferences are quite

³ At oral argument, counsel for BT directed me to a recent opinion from this district finding claims not patent-ineligible under section 101, *Nielsen Co. (US), LLC v. Hyphametrics, Inc.*, No. CV 23-136, 2025 WL 2051443, at *4–7 (D. Del. July 22, 2025). The court in *Nielsen* found the claims were directed to a specific technological problem, namely, “solving an issue in collecting data, not about data collection itself,” and “improving speed and reliability of detecting overlays in images, with reduced or eliminated human oversight.” *Id.* at *5, *6. Although the *Nielsen* case adds to the relevant jurisprudence addressing challenges under section 101, it does not change the relevant analysis, as the invention in that case was clearly directed to an improvement in a computer, not merely the use of a computer as a tool.

different. Moreover, such a subject's preferences may change over time, with the changes manifesting themselves in the varying choices the subject makes. An observant person would notice the difference and would be likely to discount the subject's initial professed preferences in favor of the choices that the subject actually makes on a day-to-day basis over time.

At bottom, that is the process recited in claim 10 of the '105 patent. It is an abstract process that can be performed in the human mind. The fact that the process can be performed more quickly and efficiently with the aid of a computer drawing the same inferences that a human would draw but on a larger scale, does not convert the abstract idea into one that is patent eligible. *See Recentive Analytics*, 134 F.4th at 1215 (“[T]he claimed methods are not rendered patent eligible by the fact that (using existing machine learning technology) they perform a task previously undertaken by humans with greater speed and efficiency than could previously be achieved. We have consistently held, in the context of computer-assisted methods, that such claims are not made patent eligible under § 101 simply because they speed up human activity.”); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343, 1346 (Fed. Cir. 2014); *DealerTrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012). Accordingly, this case falls clearly on the “computers used only as a tool” side of that line, as the invention is not in any way directed to an improvement in computer functionality. Instead, it is directed to the use of conventional computer components and programs as a tool for accomplishing the claimed objective.

Moreover, it is clear that the inventors of the '105 patent do not claim to have invented an inference engine or any other specific computer-associated device. The '105 patent acknowledges that there is nothing novel about an “inference engine” itself. '105 patent, col. 1, line 56, through col. 2, line 10. It is simply a means of inferring a conclusion based on observed facts, a function that is routinely performed by humans without the aid of a computer. While computers can perform such

tasks quickly and efficiently, it is well established that claims to computers that perform tasks that can otherwise be performed by humans do not become patentable simply because the computers can perform those tasks more quickly than humans alone. *See Zillow Grp.*, 50 F.4th at 1377–78 (“[T]he claims here fail to ‘recite any assertedly inventive technology for improving computers as tools . . . and are instead directed to ‘an abstract idea for which computers are invoked merely as a tool.’”) (citations omitted); *In re Killian*, 45 F.3d at 1380. Claim 10 of the ’105 patent is not directed to an improvement in a computer or network, but simply recites the use of a computer to perform a function that could be performed without a computer. BT therefore cannot support its contention that claim 10 is patent eligible based on the references in the specification to implementing the invention on a computer.

f. The Functional Nature of Claim 10

The very general and largely functional nature of claim 10 of the ’105 patent provides further support for the conclusion that the claim is patent ineligible. As illustrated by the examples set forth above, claim 10 would read on any system or method designed to develop and update the profiles of individuals, customers, and the like based on the ongoing receipt of information about those persons.

To be sure, claim 10 is not purely functional, as it recites more than just that the invention allows personalized updating of user profiles, without any elaboration. But the elaboration is limited and abstract in nature. The claim merely recites the use of a first set of rules and a second set of rules that, along with event statistics relating to a user’s activity, can be employed to produce an updated user profile. Because neither the specification nor the claim prescribes the nature of the sets of rules, the claim is necessarily drawn to any method that uses at least two sets of rules to derive such updates upon receipt of information about a user’s activities. That claim language is so broad that it is effectively functional in nature, as it encompasses a wide range of processes for updating a user

profile, with no specificity regarding the nature of the sets of rules involved in the process or the manner in which the event statistics are employed to produce the updating of the user profiles. *See Affinity Labs of Tex.*, 838 F.3d at 1260 (“Nothing in the flow charts or the text of the specification provides any details regarding the manner in which the invention accomplishes the recited function.”); *Beteiro*, 104 F.4th at 1356 (“[T]he claims are drafted using largely (if not entirely) result-focused functional language, containing no specificity about how the purported invention achieves those results. Claims of this nature are almost always found to be ineligible for patenting under Section 101.”); *Elec. Power Grp.*, 830 F.3d at 1356 (“[T]he essentially result-focused, functional character of claim language has been a frequent feature of claims held ineligible under § 101.”).

g. The Preemptive Effect of Claim 10

Finally, the exceptional breadth of claim 10 of the '105 patent give rises to potentially sweeping preemptive effects. Claim 10 covers any method beginning with a profile of a user of particular services and updating that profile using inferences drawn from information provided about that user's subsequent activity. As such, claim 10 covers virtually any method or system that uses a computer to assemble and update profiles of individual users of virtually any product or service. The cases cited above demonstrate that methods or systems for detecting individual attributes or preferences are commonplace in various fields such as advertising, merchandising, and matchmaking. Updating such profiles is a natural follow-up step to establishing such profiles, and it entails no additional inventive step. For that reason, the broad preemptive potential of claim 10 is a further indication that the claim is drawn to an abstract idea.

In sum, based on the principles that courts have developed for testing whether a claim is drawn to an abstract idea, as well as analysis of the numerous cases that have addressed the issue of patent eligibility in the related fields of profiling, targeted advertising, and matchmaking, it is

apparent that claim 10 of the '105 patent is directed to an abstract idea under step one of the *Alice* test.

2. *Alice* Step Two

As for step two of *Alice*, BT argues that the additional elements of claim 10 of the '105 patent beyond the abstract idea are unconventional, and that the claim contains an inventive concept sufficient to render the invention patentable even if it fails the test of step one. *See* Dkt. No. 241 at 28–30; Dkt. No. 337 at 6–10. BT first argues that claim 10 “is directed to an improvement in computer technology.” Dkt. No. 241 at 29. But I have rejected that contention above in connection with step one, and the argument fares no better under step two. A purported invention that is directed to a system for generating customized or tailored computer communications based on user information, and that employs only generic computer components functioning in their known conventional manner does not embody an inventive concept. *See Impact Engine, Inc. v. Google LLC*, No. 2022-2291, 2024 WL 3287126, at *4, 7 (Fed. Cir. July 3, 2024) (“The claims also do not limit the arrangement of the claimed components in any way that recites an inventive concept. . . . [T]he relevant claims before us merely list the constituent elements of the claimed systems without providing any concrete or specific nonconventional manner in which those constituent parts are arranged or a nonconventional mode of operation that the claimed arrangement might achieve.”).

BT next argues that “claim 10 embodies an inventive concept at *Alice* step two by improving the functioning of prior art profile management systems to infer and output profile updates in a way that personalizes the profile update process itself for individual users via a non-routine and non-conventional combination of claimed elements.” Dkt. No. 241 at 29. In making that argument, BT asserts that the inventive concept embodied in claim 10 is to improve “the functioning of prior art profile management systems to infer and output profile updates in a way that personalizes the profile

update process itself for individual users via a non-routine and non-conventional combination of claimed elements.” *Id.*

Stripped of its rhetoric, BT is simply identifying “personalization” as the inventive concept. That understanding was confirmed by BT’s counsel at oral argument, during which counsel repeatedly identified “personalization” as the critical part of claim 10. The problem with identifying personalization as the inventive concept is that “personalization” is the concept that I have found to be abstract in step one. The Federal Circuit has explained that “a claimed invention’s use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’ than that ineligible concept.” *BSG Tech*, 899 F.3d at 1290. In other words, “[i]f a claim’s only ‘inventive concept’ is the application of an abstract idea using conventional and well-understood techniques, the claim has not been transformed into a patent-eligible application of an abstract idea.” *Id.* Therefore, even if personalizing the matchmaking process is inventive, personalization—as an abstract idea—cannot supply the inventive conceptive under step two. *Broadband*, 113 F.4th at 1370; *Simio, LLC v. FlexSim Software Prods., Inc.*, 983 F.3d 1353, 1363 (Fed. Cir. 2020); *ChargePoint*, 920 F.3d at 774.

Moreover, addressing the computer science field in *Alice*, the Supreme Court made it clear that merely implementing an abstract idea on a computer does not render an invention patent eligible. As the Court explained, “The introduction of a computer into the claims does not alter the analysis at *Mayo* step two.” 573 U.S. at 222. Therefore, the fact that BT implements personalized matchmaking on a computer does not save the claim under step two.

BT’s argument appears to be predicated on the notion that what is novel in the invention is that it provides for updating user profiles for individual users rather than for the group as a whole. But certain uses for making preference determinations, such as matchmaking, are necessarily

directed at determining individual preferences, because the systems are ultimately directed at matching individuals. The simple recitation that the profile updating system is “personalized” and is directed at updating the profiles of individual “users” thus does not satisfy the requirement that the claim be directed to an “inventive concept” as opposed to practices that are “well understood, routine, and conventional.” *Mayo*, 566 U.S. at 73; *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1367 (Fed. Cir. 2018) (“The second step of the *Alice* test is satisfied when the claim limitations involve more than performance of ‘well-understood, routine, [and] conventional activities previously known to the industry.’”).

Next, in response to IAC’s contention that claim 10 does not disclose “how the desired result is achieved,” BT argues that I answered that objection in the claim construction order in this case, where I stated that “the claims and specification are clear with regard to how ‘personalized rule weightings’ are adjusted or generated ‘according to [a] second set of rules and with reference to . . . user preference data.’” Dkt. No. 131 at 8. That is not correct.

My statement in the claim construction order addressed a dispute between the parties as to the proper construction of the term “personalized rule weightings.” I concluded that the claim language and the specification made clear that under the proper construction, “personalized rule weightings” meant “weights that are derived from the user preference data and are applied to the output of the first set of rules.” *Id.* at 9. That statement, however, did not answer the question whether claim 10 is functional in nature, in that it merely states a result and does not describe how that result is reached.

Although, as pointed out above, claim 10 is not purely functional, it is nonetheless largely functional in nature, and in light of its largely functional character, it does not contain an inventive concept consisting of more than well understood, routine and conventional activities previously

known to the industry. The broad references to the two sets of rules applied by an inference engine in light of received event statistics are really no more than references to the general process of determining an individual's profile consisting of a collection of interests or attributes derived from information about that person and then updating that profile in light of subsequently obtained information. That process does not encompass an inventive concept.

In addition, the broad preemptive scope of claim 10 of the '105 patent, discussed above in connection with step one of the *Alice* test, applies to step two as well. As the Federal Circuit has noted,

claims that “recite a specific, discrete implementation of the abstract idea” rather than “preempt[ing] all ways of” achieving an abstract idea using a computer may include an inventive concept. . . . But claims to “an abstract idea implemented on generic computer components, without providing a specific technical solution beyond simply using generic computer concepts in a conventional way” do not pass muster at step two.

In re Killian, 45 F.4th at 1382 (citations omitted).

Finally, citing *Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018), BT argues that at step two of the *Alice* analysis, the question whether a claim element or combination of elements is “well-understood, routine, and conventional” is a question of fact that must be proved by clear and convincing evidence. BT asserts that it has raised factual issues with respect to the issue of patent eligibility that preclude the entry of summary judgment against it on that issue. That argument is not convincing. While it is true that questions of patent eligibility can sometimes turn on factual issues, as *Berkheimer* explained, that is far from always the case. And in this case BT has not pointed to any factual issue the resolution of which is necessary to the decision in this case.

The Federal Circuit has held that step one of *Alice* “presents a legal question that can be answered based on the intrinsic evidence.” *CardioNet, LLC v. InfoBionic, Inc.*, 955 F.3d 1358, 1372

(Fed Cir. 2020). Step two is also directed to a question of law, although “[u]nderlying factual determinations may inform this legal determination.” *BSG Tech*, 899 F.3d at 1290. As the Federal Circuit has explained, the *Alice* step two analysis “requires ‘a search for an inventive concept—i.e., an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’” *Optis Cellular Tech., LLC v. Apple Inc.*, 139 F.4th 1363, 1380 (Fed. Cir. 2025) (alteration in the original). Thus, the appropriate question at *Alice* step two “is not whether the entire claim as a whole was ‘well-understood, routine [and] conventional,’” but whether, apart from the abstract idea itself, the additional element individually or in combination with others added anything inventive. *Chamberlain Grp., Inc. v. Techtronic Indus. Co.*, 935 F.3d 1341, 1348–49 (Fed. Cir. 2019).

In this case, IAC submits that there is no genuine issue over any underlying facts. In support of that contention, IAC points to the opinion of BT’s expert that the various claim elements were individually known in the prior art; the specification of the ’105 patent, which notes that conventional computers can be used to run the invention; and portions of the inventor’s deposition. Dkt. No. 231 at 4–5, 14–15. IAC also notes that none of the technical implemental details recited in the specification are found in claim 10 and thus those details cannot save the claim under step two. *Id.* at 16. In its response, BT fails to identify any contrary evidence sufficient to raise a question of fact. *See* Dkt. No. 241 at 22–28.

During oral argument on IAC’s motion for summary judgment, BT moved to supplement the record with deposition testimony from IAC’s expert, Dr. Joseph Kostan, that had been elicited after the briefing on the motion was completed. BT offered no explanation for its failure to seek to supplement the summary judgment record with the deposition testimony at any time before the oral argument, which is reason enough to disregard the testimony. By failing to do so, BT has forfeited

its right to rely on those materials. *See Dawley v. Erie Indem. Co.*, 100 F. App'x 877, 881 (3d Cir. 2004) (“Rule 56 does not oblige a district court to scour the record as it existed at the time summary judgment was entered.”); *see also In re Cygnus Telecomms. Tech., LLC, Patent Litig.*, 536 F.3d 1343, 1352 (Fed. Cir. 2008); *Amnesty Am. v. Town of West Hartford*, 288 F.3d 467, 470–71 (2d Cir. 2002); *Carmen v. San Francisco Unified Sch. Dist.*, 237 F.3d 1026 (9th Cir. 2001).

Even assuming the deposition testimony was properly before the court for purposes of the summary judgment proceedings, the testimony fails to show that claim 10 of the '105 patent satisfied step two of the *Alice* test. In the portion of the deposition cited by BT's counsel, Dr. Konstan testified that he disagreed with various findings and conclusions made by the Patent and Trademark Appeal Board during a related post-grant proceeding because those findings were in tension with the way in which the present case has been litigated by BT. Konstan Mar. 26, 2025, Dep. Tr. at 113–122. Nothing in that portion of his testimony bears on whether the invention recited in claim 10 embodies an inventive concept under step two of *Alice*. At best, that testimony may be relevant to the issues of obviousness or anticipation, but the fact that an invention might be novel “does not avoid the problem of abstractness.” *See Affinity Labs of Tex.*, 838 F.3d at 1263. In short, BT has not shown that there is a genuine dispute of fact that is material to the step two inquiry, so there is no factual determination that needs to be made or that would alter the conclusion that claim 10 is directed to unpatentable subject matter.

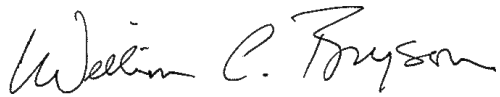
Because claim 10 fails to satisfy both the first and second steps of the test for patent eligibility set forth by the Supreme Court and the Federal Circuit, the defendants are entitled to summary judgment that claim 10 of the '105 patent is invalid. This order ends the litigation in this long-running case. The parties are directed to provide a proposed form of judgment to the court within seven days of the date of this order.

* * * * *

In an abundance of caution, this order has been filed under seal because some of the parties' briefs have been filed under seal (although it is unclear why that was necessary). Within three business days of the issuance of this order, the parties are directed to advise the court by letter whether they wish any portions of the order to remain under seal. Any request that portions of the order should remain under seal must be supported by a particularized showing of need to limit public access to those portions of the order.

IT IS SO ORDERED.

SIGNED THIS 5th day of August, 2025.

A handwritten signature in black ink, reading "William C. Bryson". The signature is fluid and cursive, with the first name "William" and last name "Bryson" clearly distinguishable.

WILLIAM C. BRYSON
UNITED STATES CIRCUIT JUDGE